IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

ROELVINK et al.

Group Art Unit: 1635

Application No. 09/780,224

Examiner: GUZO, David

Filing Date: February 9, 2001

For: ADENOVIRAL CAPSID CONTAINING CHIMERIC PROTEIN IX

AMENDMENTS TO SPECIFICATION MADE IN RESPONSE TO NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Page 11, Paragraph 0029 is amended as follows:

[0029] The base adenovirus vector, the so-called doubly ablated vector, has a fiber gene with the mutations S to E at position 408 and RLNAEK (SEQ ID NO: 14) to SLNGGG (SEQ ID NO: 15) between the positions 412-417, of the AB loop of the fiber gene, which reduces the affinity of the vector for native cell-surface binding sites (see Roelvink et al., *Science*, *286*, 1568-71 (1999)). The penton lacks the sequence RGD present in the RGD loop of wild-type penton proteins, which serves as an internalization sequence for the adenoviral vector. Furthermore, the E1 region in this vector has been replaced with a construct, which consists of a bleomycin resistance gene, and an insect N-defensin gene under control of the *E. coli* lac promoter. The nucleic acids encoding the chimeric protein IX mutants, present on a small and easily manipulated cloning vector, are recombined into the E1 region of the doubly ablated adenoviral vector using methods known to those skilled in the art. This also introduces a CMV promoter-driven marker enzyme gene such as luciferase into the E1 region.

PATENT
Attorney Docket No. 208859

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AMENDMENT AND RESPONSE TO NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

U.S. Patent and Trademark Office
P.O. Box 2327
Arlington, VA 22202

Dear Sir:

In response to the Examiner's Communication and Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures dated June 21, 2002, please enter the following amendments and consider the following remarks:

AMENDMENTS

IN THE SPECIFICATION:

Page 11, please amend Paragraph 0029 to read as follows:

[0029] The base adenovirus vector, the so-called doubly ablated vector, has a fiber gene with the mutations S to E at position 408 and RLNAEK (SEQ ID NO: 14) to SLNGGG (SEQ ID NO: 15) between the positions 412-417, of the AB loop of the fiber gene, which reduces the affinity of the vector for native cell-surface binding sites (see Roelvink et al., *Science*, *286*, 1568-71 (1999)). The penton lacks the sequence RGD present in the RGD loop of wild-type penton proteins, which serves as an internalization